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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,948	07/17/2003	Herman Dietrich Dierks JR.	AUS920030470US1	1548

35525 7590 03/01/2006

IBM CORP (YA)
C/O YEE & ASSOCIATES PC
P.O. BOX 802333
DALLAS, TX 75380

EXAMINER

CASIANO, ANGEL L

ART UNIT PAPER NUMBER

2182

DATE MAILED: 03/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/621,948

Applicant(s)

DIERKS ET AL.

Examiner

Angel L. Casiano

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>20030717</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

- The present Office action is in response to application dated 17 July 2003.
- Claims 1-20 are pending. All claims have been examined.

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 07/17/2003 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required

corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The use of the trademark JAVA has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

4. The disclosure is objected to because of the following informalities: cross-reference information must be updated (see Page 1, line 12).

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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6. Claims 7 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claims 7 and 15 teach, "means for setting the length field" as follow:

Length field = (ABS (frame size/CLS) + 1)*CLS, wherein "CLS" is defined as "the cache length size". However, the term "ABS" is not defined by the claim or by the Specification, rendering the claim indefinite.

Claim Rejections - 35 USC § 101

8. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

- Claims 17 and 18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The present claims recite "a computer program product in a computer readable medium". This medium is not recited as "storage" or "tangible" and therefore does not fall within the categories of patentable subject matter

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(e.g. process, machine, manufacture, or composition of matter, or any new and useful improvement thereof).

- Claims 17 and 18 are rejected under 35 U.S.C. 101 because the claimed invention lacks patentable utility. These claims recite instructions for performing particular functions (e.g. "receiving" and "setting"). However, these instructions lack practical application.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1-3, 5, 9-11, 13, 17, and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Browen [US 6,633,832 B1].

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Regarding **claim 1**, Brown teaches a method for transferring data from a memory to a network adapter (see col. 3, lines 6-7 and 12-13). The reference teaches receiving a request (see Figure 3; col. 4, line 29) to transfer data in the memory to a network adapter; and setting a transfer size to align the data (see col. 4, lines 37-40) with a cache line size if the amount of data to be transferred is unequal to the cache line size, wherein an amount of data is less than or equal to the transfer size (see col. 4, lines 29-31).

As for **claim 2**, the reference teaches transferring the amount of data in a frame, with a frame size (see col. 4, lines 45-47).

As for **claim 3**, Brown teaches a length indicator is set to the amount of data and the network adapter outputs only the amount of data set by the valid length indicator after the data has been transferred to the network adapter (see col. 4, lines 52-56, *PCI-X transaction is initiated with the programmed alignment and any relevant behavior properties*).

As for **claim 5**, Brown teaches data transferred from the memory to the network adapter through a bridge chip (see Figure 1, "Host/PCI-X Cache/Bridge 108").

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Regarding independent **claim 9**, Browen teaches the method for transferring data from a memory to a network adapter in a data processing system (*supra*). Accordingly, the reference also teaches the means for performing this method. The present claim is rejected under the same basis.

As for dependent **claims 10-11 and 13**, Browen teaches the method for transferring data from a memory to a network adapter in a data processing system (*supra*). Therefore, the present claims are rejected under the same basis.

Regarding independent **claim 17**, Browen teaches the method for transferring data from a memory to a network adapter in a data processing system (*supra*). Accordingly, the reference also teaches the computer program product for performing this method. The present claim is rejected under the same basis.

Regarding independent **claim 19**, Browen teaches the method for transferring data from a memory to a network adapter in a data processing system (*supra*). Therefore, the reference also teaches the server for implementing this method. The present claim is rejected under the same basis.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to

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point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14. Claims 4 and 12 have rejected under 35 U.S.C. 103(a) as being unpatentable over Browen [US 6,633,832 B1] in view of McCrory et al. [US 2002/0095554 A1].

As for **claim 4**, Browen does not teach the cache line size, as being 2^n , where in n is a positive integer. As for this limitation, McCrory et al. teaches cache line size as being a power of 2 (see 2^n). The McCrory et al. also teaches this size where n is a positive integer (see "16, 32, 64, 128", Page 3, paragraph 0036). At the time of the invention, one of ordinary skill in the art would have been motivated to combine the cited disclosures in order to obtain a method including a "typical" cache line size, as taught by McCrory et al. (see Id.)

As for dependent **claim 12**, the combination of references teaches the method for transferring data from a memory to a network adapter in a data processing system (*supra*). Therefore, the present claim is rejected under the same rationale.

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15. Claims 6-8, 14-16, 18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown [US 6,633,832 B1] in view of Ishida [US 6,456,283 B1].

Regarding **claim 6**, Brown teaches a method for transferring data from a memory to a network adapter (see col. 3, lines 6-7 and 12-13). The reference teaches receiving a request (see Figure 3; col. 4, line 29) to transfer data in the memory to a network adapter; and setting a transfer size to align the data (see col. 4, lines 37-40; *"allows for full testing on various memory address alignments and cache boundaries"*) with a cache line size if the amount of data to be transferred is unequal to the cache line size, wherein an amount of data is less than or equal to the transfer size (see col. 4, lines 29-31). Furthermore, Brown teaches transferring the amount of data in a frame, with a frame size (see col. 4, lines 45-47).

Although the Brown reference clearly teaches setting a length value according to the cache size, it does not specify whether the frame size is divisible by a cache line size with or without a remainder, in order to set the length, as claimed.

Ishida teaches a method in which if the size is divisible with no remainder, a length is established equal to the length

field. If it results in a remainder, it sets the field to align the data (see col. 8, lines 37-47).

At the time of the invention, one of ordinary skill in the art would have been motivated to combine the cited disclosures in order to obtain a method of setting length fields applied to computer graphics, having "speedily" execution of functions, as taught by Ishida (see col. 1, lines 7-10).

As for **claim 7**, Brown teaches setting a size to align the data (see col. 4, lines 37-40). In addition, Ishida teaches dividing the size in order to consider whether it yields a remainder (see col. 8, lines 37-47). Although the combination of references does not teach the calculation as:

$$\text{Length field} = (\text{ABS} (\text{frame size}/\text{CLS}) + 1) * \text{CLS},$$

The Examiner respectfully submits that this constitutes an example of a calculation, which represents a determination of whether the frame size is divisible without a remainder. Therefore, the present formula is an example of the calculation taught by the combination of references.

As for **claim 8**, the combination of references (see Brown) teaches a length indicator set to the amount of data and the network adapter outputs only the amount of data set by the valid

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length indicator after the data has been transferred to the network adapter (see col. 4, lines 52-56, *PCI-X transaction is initiated with the programmed alignment and any relevant behavior properties*).

Regarding independent **claim 14**, the combination of references teaches the method for transferring data from a memory to a network adapter in a data processing system (*supra*). Accordingly, the combination also teaches the means for performing this method. The present claim is rejected under the same rationale.

As for dependent **claims 15-16**, the combination of references teaches the method for transferring data from a memory to a network adapter in a data processing system (*supra*). The combination of Brown in view of Ishida also teaches the means for implementing this method. Therefore, the present claims are rejected under the same rationale.

Regarding independent **claim 18**, the combination of references teaches the method for transferring data from a memory to a network adapter in a data processing system (*supra*). Accordingly, the combination also teaches the computer program

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product for performing this method. The present claim is rejected under the same rationale.

Regarding independent claim 20, the combination of references teaches the method for transferring data from a memory to a network adapter in a data processing system (*supra*). Therefore, the combination also teaches the server for implementing this method. The present claim is rejected under the same rationale.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

a. Ono et al. [US 6625806 B1] teaches: "In the direct map type cache memory, the occupied position of the function in the cache memory is a remainder of division of the function address in the memory by a cache size. Since loading of the function from the memory to the cache memory is performed per block, the question of whether runtime routines will overlap in the same cache block may be determined by whether a portion of the lower 12 bits of an address, excluding the lower 5 bits, are matched or not when the

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cache size is 4096 bytes and the block size is 32 bytes"
(emphasis added).

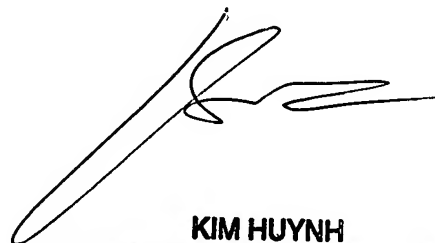
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angel L. Casiano whose telephone number is 571-272-4142. The examiner can normally be reached on 9:00-5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on 571-272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alc
17 February 2006



KIM HUYNH
SUPERVISORY PATENT EXAMINER

2/21/06